	Application No.	Applicant(s)
Notice of Allowability	09/508,658	KROHN ET AL.
	Examiner	Art Unit	
	Jehanne S. Sitton	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to *10/2/2006*.

2. ☒ The allowed claim(s) is/are *27,36 and 37*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date *7/06, 3/00*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☒ Other *Alignment of instant Seg ID NO: 1 w/ Seg ID NO: 1 of US Patent 6,951,928*

REASONS FOR ALLOWANCE

1.   The following is an examiner's statement of reasons for allowance: The claims are drawn

to an isolated nucleic acid molecule comprising the sequence of SEQ ID NO: 1, as well as

isolated nucleic acid molecules comprising SEQ ID NO: 1 where position 905 is a T instead of a

C, or where position 383 is a G instead of an A. The prior art does not teach or fairly suggest the

sequence of these nucleic acid molecules. Support for the nucleotide alterations is in SEQ ID

NO: 1 as well as figure 3A, B, and C, (alignment of the sequences for the sequencing results with

SEQ ID NO: 1). Support for the amendments to the specification and the drawings (Figure 2) to

change K42E to K83E is in Figure 3C, which contains the data for the sequencing reaction to

determine the mutation at position 383 of SEQ ID NO: 1. Alignment of the nucleotides

surrounding the mutant position with SEQ ID NO: 1 reveals that the designation of codon 42 was

incorrect and that the correct codon is 83. Accordingly, one of skill in the art would not only

recognize that the designation of codon 42 in the specification was an obvious error, but would

also recognize the appropriate correction. MPEP 2163.07 II. SEQ ID NO: 1 and Figures 3A,

3B, and 3C are supported in all previous priority documents.

Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Response to Request for Declaration of Interference Pursuant to 37 CFR 41.202

2.   In the reply filed 10/2/2006, applications suggested that and interference be declared

between instant claims 27 and 36 and claims 2-4 of US Patent 6,951,928. The remarks as well as

the claims of the instant specification and those of the '928 patent, as well as the specification of each, have been thoroughly reviewed. However, the claims in the instant application and those of the '928 Peltonen patent fail the two way test for the following reasons. 41.203 (a) states: *"Interfering subject matter. An interference exists if the subject matter of a claim of one party would, if prior art, <u>have anticipated or rendered obvious the subject matter of a claim of the opposing party and vice versa.</u>"*

SEQ ID NO: 1 of the instant application and SEQ ID NO: 1 of the '928 patent are not identical. An alignment is provided.

Instant SEQ ID NO: 1, the subject matter of claims 27 and 36, contains 16 nucleotides on the 5' end which are not taught or suggested by SEQ ID NO: 1 of the '928 patent, the claims of the '928 patent, nor the disclosure of the '928 patent. Therefore, (with regard to the comments regarding count 1 at pages 3-5 of the response), none of the claims of the '928 patent either anticipate or are obvious over the nucleic acid molecule of instant claim 27, that is an isolated nucleic acid molecule comprising instant SEQ ID NO: 1, or the nucleic acids in claims 36 (count 2 suggested by applicant) and 37 of the instant application. On this basis, the claims fail the two way test and an interference has not been declared.

Also of note, SEQ ID NO: 1 of the '928 patent contains 25 nucleotides on the 3' end which are not taught or suggested by instant SEQ ID NO:1, claims 27, 36, or 37, or the disclosure of the instant specification. Additionally, a mismatch occurs at position 817 (C) of instant SEQ ID NO: 1 and position 801 (T) of SEQ ID NO: 1 of the '928 patent, accordingly, the sequences of instant SEQ ID NO: 1 and SEQ ID NO: 1 of the '928 patent are not identical.

Therefore claims 27, 36, and 37 of instant application are allowed.

3.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to examiner Jehanne Sitton whose telephone number is (571) 272-

0752. The examiner can normally be reached Monday-Thursday from 8:00 AM to 5:00 PM and

on alternate Fridays.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ram Shukla, can be reached on (571) 272-0735. The fax phone number for this

Group is (571) 273-8300.

        Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to (571) 272-0547.

        Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information
Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are
available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your
application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of
the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants
can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service
center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and
history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent
information available to the public.

        For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Jehanne Sitton
Primary Examiner
Art Unit 1634

1/4/07

US-09-509-595B-1
; Sequence 1, Application US/09509595B
; Patent No. 6951928
; GENERAL INFORMATION:
; APPLICANT: MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V.
; APPLICANT: NATIONAL PUBLIC HEALTH INSTITUTE
; APPLICANT: PELTONEN, Leena
; APPLICANT: AALTONEN, Johanna
; APPLICANT: BJORSES, Petra
; APPLICANT: PERHEENTUPA, Jaakko
; APPLICANT: PALOTIE, Aarno
; APPLICANT: HORELLI-KUITUNEN, Nina
; APPLICANT: YASPO, Marie-Laure
; APPLICANT: LEHRACH, Hans
; TITLE OF INVENTION: NUCLEIC ACID MOLECULE ENCODING A (POLY)PEPTIDE CO-
SEGREGATING IN MUTATED
; TITLE OF INVENTION: FORM WITH AUTOIMMUNE POLYENDOCRINOPATHY CANDIDIASIS
ECTODERMAL DYSTROPHY
; TITLE OF INVENTION: (APECED)
; FILE REFERENCE: VOSS1130
; CURRENT APPLICATION NUMBER: US/09/509,595B
; CURRENT FILING DATE: 2000-07-05
; PRIOR APPLICATION NUMBER: EP 97117154.1
; PRIOR FILING DATE: 1997-10-02
; PRIOR APPLICATION NUMBER: EP 97117398.4
; PRIOR FILING DATE: 1997-10-08
; PRIOR APPLICATION NUMBER: EP 97119810.6
; PRIOR FILING DATE: 1997-11-12
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
;   LENGTH: 2245
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (121)..(1758)
;   OTHER INFORMATION:
US-09-509-595B-1

   Query Match   99.1%; Score 2018.4; DB 3; Length 2245;
   Best Local Similarity 99.9%; Pred. No. 0;
   Matches 2019; Conservative   0; Mismatches   1; Indels   0; Gaps   0;

Qy   17 CGGGCGCACAGCCGGCGCGGAGGCCCCACAGCCCCGCCGGGACCCGAGGCCAAGCGAGGG 76
            |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1 CGGGCGCACAGCCGGCGCGGAGGCCCCACAGCCCCGCCGGGACCCGAGGCCAAGCGAGGG 60

Qy   77 GCTGCCAGTGTCCCGGGACCCACCGCGTCCGCCCCAGCCCCGGGTCCCCGCGCCCACCCC 136
            |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   61 GCTGCCAGTGTCCCGGGACCCACCGCGTCCGCCCCAGCCCCGGGTCCCCGCGCCCACCCC 120

Qy   137 ATGGCGACGGACGCGGCGCTACGCCGGCTTCTGAGGCTGCACCGCACGGAGATCGCGGTG 196
            |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   121 ATGGCGACGGACGCGGCGCTACGCCGGCTTCTGAGGCTGCACCGCACGGAGATCGCGGTG 180

Qy   197 GCCGTGGACAGCGCCTTCCCACTGCTGCACGCGCTGGCTGACCACGACGTGGTCCCCGAG 256

```
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181   GCCGTGGACAGCGCCTTCCCACTGCTGCACGCGCTGGCTGACCACGACGTGGTCCCCGAG   240

Qy    257   GACAAGTTTCAGGAGACGCTTCATCTGAAGGAAAAGGAGGGCTGCCCCCAGGCCTTCCAC   316
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241   GACAAGTTTCAGGAGACGCTTCATCTGAAGGAAAAGGAGGGCTGCCCCCAGGCCTTCCAC   300

Qy    317   GCCCTCCTGTCCTGGCTGCTGACCCAGGACTCCACAGCCATCCTGGACTTCTGGAGGGTG   376
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301   GCCCTCCTGTCCTGGCTGCTGACCCAGGACTCCACAGCCATCCTGGACTTCTGGAGGGTG   360

Qy    377   CTGTTCAAGGACTACAACCTGGAGCGCTATGGCCGGCTGCAGCCCATCCTGGACAGCTTC   436
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361   CTGTTCAAGGACTACAACCTGGAGCGCTATGGCCGGCTGCAGCCCATCCTGGACAGCTTC   420

Qy    437   CCCAAAGATGTGGACCTCAGCCAGCCCCGGAAGGGGAGGAAGCCCCCGGCCGTCCCCAAG   496
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421   CCCAAAGATGTGGACCTCAGCCAGCCCCGGAAGGGGAGGAAGCCCCCGGCCGTCCCCAAG   480

Qy    497   GCTTTGGTACCGCCACCCAGACTCCCCACCAAGAGGAAGGCCTCAGAAGAGGCTCGAGCT   556
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481   GCTTTGGTACCGCCACCCAGACTCCCCACCAAGAGGAAGGCCTCAGAAGAGGCTCGAGCT   540

Qy    557   GCCGCGCCAGCAGCCCTGACTCCAAGGGGCACCGCCAGCCCAGGCTCTCAACTGAAGGCC   616
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541   GCCGCGCCAGCAGCCCTGACTCCAAGGGGCACCGCCAGCCCAGGCTCTCAACTGAAGGCC   600

Qy    617   AAGCCCCCCAAGAAGCCGGAGAGCAGCGCAGAGCAGCAGCGCCTTCCACTCGGGAACGGG   676
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601   AAGCCCCCCAAGAAGCCGGAGAGCAGCGCAGAGCAGCAGCGCCTTCCACTCGGGAACGGG   660

Qy    677   ATTCAGACCATGTCAGCTTCAGTCCAGAGAGCTGTGGCCATGTCCTCCGGGGACGTCCCG   736
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661   ATTCAGACCATGTCAGCTTCAGTCCAGAGAGCTGTGGCCATGTCCTCCGGGGACGTCCCG   720

Qy    737   GGAGCCCGAGGGGCCGTGGAGGGGATCCTCATCCAGCAGGTGTTTGAGTCAGGCGGCTCC   796
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721   GGAGCCCGAGGGGCCGTGGAGGGGATCCTCATCCAGCAGGTGTTTGAGTCAGGCGGCTCC   780

Qy    797   AAGAAGTGCATCCAGGTTGGCGGGGAGTTCTACACTCCCAGCAAGTTCGAAGACTCCGGC   856
            |||||||||||||||||||||||| |||||||||||||||||||||||||||||||||||
Db    781   AAGAAGTGCATCCAGGTTGGTGGGGAGTTCTACACTCCCAGCAAGTTCGAAGACTCCGGC   840

Qy    857   AGTGGGAAGAACAAGGCCCGCAGCAGCAGTGGCCCGAAGCCTCTGGTTCGAGCCAAGGGA   916
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841   AGTGGGAAGAACAAGGCCCGCAGCAGCAGTGGCCCGAAGCCTCTGGTTCGAGCCAAGGGA   900

Qy    917   GCCCAGGGCGCTGCCCCCGGTGGAGGTGAGGCTAGGCTGGGCCAGCAGGGCAGCGTTCCC   976
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901   GCCCAGGGCGCTGCCCCCGGTGGAGGTGAGGCTAGGCTGGGCCAGCAGGGCAGCGTTCCC   960

Qy    977   GCCCCTCTGGCCCTCCCCAGTGACCCCCAGCTCCACCAGAAGAATGAGGACGAGTGTGCC   1036
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961   GCCCCTCTGGCCCTCCCCAGTGACCCCCAGCTCCACCAGAAGAATGAGGACGAGTGTGCC   1020

Qy    1037  GTGTGTCGGGACGGCGGGGAGCTCATCTGCTGTGACGGCTGCCCTCGGGCCTTCCACCTG   1096
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db    1021  GTGTGTCGGGACGGCGGGGAGCTCATCTGCTGTGACGGCTGCCCTCGGGCCTTCCACCTG  1080

Qy    1097  GCCTGCCTGTCCCCTCCGCTCCGGGAGATCCCCAGTGGGACCTGGAGGTGCTCCAGCTGC  1156
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1081  GCCTGCCTGTCCCCTCCGCTCCGGGAGATCCCCAGTGGGACCTGGAGGTGCTCCAGCTGC  1140

Qy    1157  CTGCAGGCAACAGTCCAGGAGGTGCAGCCCCGGGCAGAGGAGCCCCGGCCCCAGGAGCCA  1216
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1141  CTGCAGGCAACAGTCCAGGAGGTGCAGCCCCGGGCAGAGGAGCCCCGGCCCCAGGAGCCA  1200

Qy    1217  CCCGTGGAGACCCCGCTCCCCCCGGGGCTTAGGTCGGCGGGAGAGGAGGTAAGAGGTCCA  1276
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1201  CCCGTGGAGACCCCGCTCCCCCCGGGGCTTAGGTCGGCGGGAGAGGAGGTAAGAGGTCCA  1260

Qy    1277  CCTGGGGAACCCCTAGCCGGCATGGACACGACTCTTGTCTACAAGCACCTGCCGGCTCCG  1336
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1261  CCTGGGGAACCCCTAGCCGGCATGGACACGACTCTTGTCTACAAGCACCTGCCGGCTCCG  1320

Qy    1337  CCTTCTGCAGCCCCGCTGCCAGGGCTGGACTCCTCGGCCCTGCACCCCCTACTGTGTGTG  1396
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1321  CCTTCTGCAGCCCCGCTGCCAGGGCTGGACTCCTCGGCCCTGCACCCCCTACTGTGTGTG  1380

Qy    1397  GGTCCTGAGGGTCAGCAGAACCTGGCTCCTGGTGCGCGTTGCGGGGTGTGCGGAGATGGT  1456
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1381  GGTCCTGAGGGTCAGCAGAACCTGGCTCCTGGTGCGCGTTGCGGGGTGTGCGGAGATGGT  1440

Qy    1457  ACGGACGTGCTGCGGTGTACTCACTGCGCCGCTGCCTTCCACTGGCGCTGCCACTTCCCA  1516
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1441  ACGGACGTGCTGCGGTGTACTCACTGCGCCGCTGCCTTCCACTGGCGCTGCCACTTCCCA  1500

Qy    1517  GCCGGCACCTCCCGGCCCGGGACGGGCCTGCGCTGCAGATCCTGCTCAGGAGACGTGACC  1576
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1501  GCCGGCACCTCCCGGCCCGGGACGGGCCTGCGCTGCAGATCCTGCTCAGGAGACGTGACC  1560

Qy    1577  CCAGCCCCTGTGGAGGGGGTGCTGGCCCCCAGCCCCGCCCGCCTGGCCCCTGGGCCTGCC  1636
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1561  CCAGCCCCTGTGGAGGGGGTGCTGGCCCCCAGCCCCGCCCGCCTGGCCCCTGGGCCTGCC  1620

Qy    1637  AAGGATGACACTGCCAGTCACGAGCCCGCTCTGCACAGGGATGACCTGGAGTCCCTTCTG  1696
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1621  AAGGATGACACTGCCAGTCACGAGCCCGCTCTGCACAGGGATGACCTGGAGTCCCTTCTG  1680

Qy    1697  AGCGAGCACACCTTCGATGGCATCCTGCAGTGGGCCATCCAGAGCATGGCCCGTCCGGCG  1756
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1681  AGCGAGCACACCTTCGATGGCATCCTGCAGTGGGCCATCCAGAGCATGGCCCGTCCGGCG  1740

Qy    1757  GCCCCCTTCCCCTCCTGACCCCAGATGGCCGGGACATGCAGCTCTGATGAGAGAGTGCTG  1816
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1741  GCCCCCTTCCCCTCCTGACCCCAGATGGCCGGGACATGCAGCTCTGATGAGAGAGTGCTG  1800

Qy    1817  AGAAGGACACCTCCTTCCTCAGTCCTGGAAGCCGGCCGGCTGGGATCAAGAAGGGGACAG  1876
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1801  AGAAGGACACCTCCTTCCTCAGTCCTGGAAGCCGGCCGGCTGGGATCAAGAAGGGGACAG  1860

Qy    1877  CGCCACCTCTTGTCAGTGCTCGGCTGTAAACAGCTCTGTGTTTCTGGGGACACCAGCCAT  1936
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1861  CGCCACCTCTTGTCAGTGCTCGGCTGTAAACAGCTCTGTGTTTCTGGGGACACCAGCCAT  1920
```

```
Qy     1937 CATGTGCCTGGAAATTAAACCCTGCCCCACTTCTCTACTCTGGAAGTCCCCGGGAGCCTC 1996
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     1921 CATGTGCCTGGAAATTAAACCCTGCCCCACTTCTCTACTCTGGAAGTCCCCGGGAGCCTC 1980

Qy     1997 TCCTTGCCTGGTGACCTACTAAAAATATAAAAATTAGCTG 2036
            ||||||||||||||||||||||||||||||||||||||||
Db     1981 TCCTTGCCTGGTGACCTACTAAAAATATAAAAATTAGCTG 2020
```